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Kim Blum  
Name (Print)

*Kim Blum*  
Signature

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: MICHALUK	)	Examiner:	Lois L. Zheng
	)		
Application Number: 10/042,549	)	Group Art Unit:	1742
	)		
Filed: January 9, 2002	)	Confirmation No.:	5470
	)		
Docket No.: CPM00029CIP (3600-328-01)	)		

For: TANTALUM AND NIOBIUM BILLETS AND METHODS OF PRODUCING THE SAME

**INFORMATION DISCLOSURE STATEMENT**  
**PURSUANT TO 37 CFR 1.97(b)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

June 9, 2006

Sir:

The attention of the Patent and Trademark Office is hereby directed to the documents listed on the attached Form PTO/SB/08. Pursuant to the current United States Patent and Trademark Office rules, no copies of U.S. Patents/Patent Application Publications are provided.

This Information Disclosure Statement is being submitted with a Request for Continued Examination.

The above information is presented so that the Patent and Trademark Office can, in the first instance, determine any materiality thereof to the claimed invention. *See* 37 CFR 1.104(a) and 1.106(b) concerning the PTO duty to consider and use any such information. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the documents cited in the attached Form PTO/SB/08 be made of record therein and appear

Information Disclosure Statement  
U.S. Patent Application No. 10/042,549

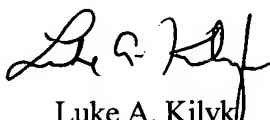
on the first page of any patent to issue therefrom.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in this application and applicant determines that the cited documents do not constitute "prior art" under United States law, applicant reserves the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

It is believed that no fee is required to make this a complete and timely filing. However, if it is determined that a petition or fee is required, the Commissioner is hereby authorized to charge any fee associated with this statement to our Deposit Account No. 50-0925.

Respectfully submitted,



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Approved for use through 04/30/2003. OMB 0651-0031

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		LASSILA et al., "Mechanical Behavior of Tantalum and Tantalum-Tungsten Alloys: Texture Gradients and Macro/Micro-Response," 14 <sup>th</sup> U.S. ARMY SYMPOSIUM ON SOLID MECHANICS, November 30, 1996 (14 pgs.)	
		MICHALUK, "Deformation Behavior of Tantalum-Tungsten Alloys," a Thesis submitted to the Faculty of Drexel University, December 1993 (158 pgs.)	
		MICHALUK et al., "The Effect of Oxygen, Grain Size, and Strain Rate on the Mechanical Behavior of Forged P/M Tantalum," date unknown (pp. 195-204)	
		HOGE, "Influence of Strain Rate on Flow Stress of Tantalum," Lawrence Radiation Laboratory, University of California, Paper 15A.4, date unknown (pp. 996-1000)	
		FOLLANSBEE, "The Hopkinson Bar," HIGH STRAIN RATE TESTING, date unknown (pp. 198-203)	
		RUDOLPH et al., "The Deformation of Tantalum-Niobium and Tantalum-Molybdenum Single Crystals," Z. METALLKDE., No. 58, H. 10, 1967 (pp. 708-713)	
		REGAZZONI et al., "Influence of Strain Rate on the Flow Stress and Ductility of Copper and Tantalum at Room Temperature," Inst. Phys. Conf. Ser. No. 70, paper presented at 3 <sup>rd</sup> Conf. Mech. Prop. High Rates of Strain, Oxford, 1984 (pp. 63-70)	
		DIAZ et al., "Evidence for Slow Strain-Rate Embrittlement in Tantalum Due to Oxygen," SCRIPTA METALLURGICA, Vol. 13, 1979 (pp. 491-496)	
		Author unknown, "Reihenentwicklung von Orientierungsverteilungsfunktionen," date known (pp. 24-25) (in German)	
		MUNDEKIS et al., "Effects of Rolling Schedule and Annealing on the High Strain Rate Behavior of Tantalum," THE MINERALS, METALS & MATERIALS SOCIETY, 1992 (pp. 77-96)	
		ARSENAULT et al., "Work-Hardening Characteristics of Ta and Ta-Base Alloys," date unknown (pp. 283-301)	
		LANDRUM et al., "The Effects of Cold-Flowing on Tantalum Material Properties," THE MINERALS, METALS & MATERIALS SOCIETY, 1992 (pp. 59-76)	
		KEH et al., "Deformation Substructure in Body-Centered Cubic Metals," SINGLE PHASE MATERIALS, Chapter 5, date unknown (pp. 231-264)	
		GOURDIN et al., "The Influence of Tungsten Alloying on the Mechanical Properties of Tantalum," JOURNAL DE PHYSIQUE IV, Colloque C8, Vol. 4, September 1994 (pp. C8-207-C8-212)	
		Author unknown, "Solid Solutions," Chapter 6, date unknown (pp. 144-149)	
		LASSILA et al., "Effects of Shock Prestrain on the Dynamic Mechanical Behavior of Tantalum," JOURNAL DE PHYSIQUE IV, Colloque C3, Vol. 1, October 1991 (pp. C3-19-C3-26)	
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		POKROSS, "Tantalum Micro-Alloys," supplied by the British Library, date unknown (pp. 297-330)	
		HULL et al., "Introduction to Dislocations," 3 <sup>rd</sup> Edition, 1984 (cover page & contents pages v-vii only)	
		Author unknown, "Mechanical Fundamentals," Dieter Mech. Metallurgy, 3 <sup>rd</sup> Ed., 1986 (pp. 82-86)	
		GRAY et al., "The High-Strain-Rate and Spallation Response of Tantalum, Ta-10W, and T-111," THE MINERALS, METALS & MATERIALS SOCIETY, 1992 (pp. 303-315)	
		RAJENDRAN et al., "Effects of Strain Rate on Plastic Flow and Fracture in Pure Tantalum," J. MATER. SHAPING TECHNOL., Vol. 9, 1991 (pp. 7-20)	
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		CARDONNE et al., "Tantalum and Its Alloys," ADVANCED MATERIALS & PROCESSES, Vol. 142, No. 3, September 1992 (pp. 16-20)	
		POKROSS, "Tantalum," Metals Handbook, 10 <sup>th</sup> Ed., Vol. 2, Properties and Selection: Nonferrous Alloys and Special-Purpose Materials, 1990 (pp. 571-574)	
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		BARBEE et al., "Dislocation Structures in Deformed and Recovered Tantalum," JOURNAL OF THE LESS-COMMON METALS, Vol. 8, 1965 (pp. 306-319)	
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		ARSENAULT, "Effects of Strain Rate and Temperature on Yield Points," TRANSACTIONS OF THE METALLURGICAL SOCIETY OF AIME, Vol. 230, December 1964 (pp. 1570-1576)	
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		MITCHELL et al., "Three-Stage Hardening in Tantalum Single Crystals," ACTA METALLURGICA, Vol. 13, November 1965 (pp. 1169-1179)	
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		SUZUKI, "Development of Refractory Metals and Silicides Targets, and Their Characteristics," MATERIALS RESEARCH SOCIETY, 1987 (pp. 339-345)	
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		SINGH, "Ultrapurification of Refractory Metals," HIGH TEMPERATURE MATERIALS AND PROCESSES, Vol. 11, Issue 1-4, January 1993 (pp. 305-349)	
		IZUMI, "Processing of Ta Powder and Mill Products at Showa-Cabot Supermetal Higashi-Nagahara Plant," SHIGEN-TO-SOZAI, Vol. 109, 1993 (pp. 1181-1186)	
		OKAMOTO et al., "Determination of Th, U, Na and K in High-Purity Tantalum," JOURNAL OF THE IRON AND STEEL INSTITUTE OF JAPAN, 1991 (pp. 1929-1935) (Synopsis in English)	
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		"Materials for Evaporation & Sputtering, MATERIALS RESEARCH CORPORATION, Third Edition, Nov. 1980 (pp. 1-24)	"
		GRUBER et al., "Electron Beam Melting with Multiple Guns," TRANSACTIONS OF THE EIGHTH NATIONAL VACUUM SYMPOSIUM, COMBINED WITH THE SECOND INT'L. CONGRESS ON VACUUM SCIENCE AND TECHNOLOGY, Vol. 2, October 16-19, 1961 (pp. 722-731)	
		CHOI et al., "Textures of Tantalum Metal Sheets by Neutron Diffraction," JOURNAL OF MATERIALS SCIENCE, Vol. 28, 1993 (pp.3283-3290)	
		SIBLEY et al., "Experience with an Electron Beam Melting Furnace," publication and date unknown (pp. 714-721)	
		CLARK et al., "Influence of Transverse Rolling on the Microstructural and Texture Development in Pure Tantalum," METALLURGICAL TRANSACTIONS A, Vol. 23A, August 1992 (pp. 2183-2191)	
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		KUMAR et al., "Corrosion Resistant Properties of Tantalum," Corrosion 95, Paper No. 253, 1995 (pp. 253/1 - 253/16)	
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		HASHIMOTO et al., "High Quality Ta <sub>2</sub> O <sub>5</sub> Films Using Ultra-High Purity Ta Sputtering Target," Extended Abstracts of the 18 <sup>th</sup> (1986 International) Conference on Solid State Devices and Materials, Tokyo, 1986 (pp. 253-256)			
		MUNDEKIS, "Effects of Rolling Schedule and Annealing on the High Strain Rate Behavior of Tantalum," paper presented at TMS meeting in Cincinnati, Ohio in 1991 (23 pages)			
		CARDONNE et al., "Refractory Metals Forum: Tantalum and Its Alloys," ADVANCED MATERIALS AND PROCESSES, Sept. 1992 (pp. 16-20)			
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